

STAFF SUMMARY SHEET

	TO	ACTION	SIGNATURE (Surname), GRADE AND DATE		TO	ACTION	SIGNATURE (Surname), GRADE AND DATE
1	USAFA/DFEI	sig	<i>Eugen AD25 27 May 14</i>	6			
2	USAFA/DFER	approve	<i>SoTL, AD22, 29 May 14</i>	7			
3	USAFA/DFEI	action		8			
4				9			
5				10			

SURNAME OF ACTION OFFICER AND GRADE
Lauren Scharff, AD25

SYMBOL
HQ USAFA/DFEI

PHONE
333-3277

TYPIST'S INITIALS
hy

SUSPENSE DATE
20130529

SUBJECT
Publication of Article based on Scholarship of Teaching and Learning (SoTL) Project

USAFA-DF-PA-347

DATE
20130527

SUMMARY

1. PURPOSE. To obtain review and approval for submission of article at Tab 1 to the Journal of Effective Teaching

2. BACKGROUND.

Tab 1:

Authors: C1C Jasmine Leyro (soon to be 2LT) and Dr. Lauren F.V. Scharff

Title: Syllabus Design and Manner of Delivery Impacts on Content Memory and Impressions

Description: The article is based on a SoTL research project conducted by Jasmine Leyro and Dr. Scharff during Spring 2013 that investigated how targeted content location (beginning vs. middle of the syllabus) and targeted content style (textual vs. graphic), in conjunction with instructor manner of delivery (verbal overview of syllabus, forewarning of quiz, independent review by students) impacted students' impressions and retention of syllabus content.

Release Information: If this article release is approved by USAFA, it will be submitted to the the Journal of Effective Teaching (<http://www.uncw.edu/cte/et/index.htm>) for their peer review process. This project was already approved for public release for the the SoTL Forum (Oct 2013) and CSURF (April 2014).

3. DISCUSSION. The article meets the journal's criteria for submission (abstract between 150-250 words, and articles between 3,000 to 8,000 words).

4. RECOMMENDATION. Sign coord block above indicating that document is suitable for public release.

L. Scharff

Lauren Scharff, AD-25, DF

Tab 1: article for submission review

Syllabus Design and Manner of Delivery Impacts on Content Memory and Impressions

Jasmine G. Leyro

Lauren V. Scharff

U. S. Air Force Academy

Author Note

We recognize and thank David J. Heaphy for his contributions during the project design phase
and early analyses.

Abstract

This study investigated how targeted content location (beginning vs. middle of the syllabus) and targeted content style (textual vs. graphic), in conjunction with instructor manner of delivery (verbal overview of syllabus, forewarning of quiz, independent review by students) impacted students' impressions and retention of syllabus content. A 10-question memory and attitude assessment was completed by 166 participants after exposure to each of two syllabi that varied in targeted content style; targeted content location and manner of delivery were varied between groups. Based on visual attention research and the serial order effect we predicted better memory for graphical information placed at the beginning of the syllabus. However, results indicated that targeted content memory accuracy was highest when that content was placed in the middle of the syllabus using a textual style, potentially due to a type of "banner effect" that led students to disregard information at the beginning of the syllabus. Importantly, explicit instructor review of that same information overrides the negative banner effect. Retention of other syllabus content was lower when the syllabus was verbally reviewed, possibly due to cognitive overload and paraphrasing of details; however, verbal review also led to the greatest reported interest in the hypothetical course and ratings of the instructor. This work has implications for the effective design and delivery of syllabi, as well as the design and delivery of other documents.

Keywords: syllabus design, instructor delivery, content retention, instructor impressions

Syllabus Design and Manner of Delivery Impacts on Content Memory and Impressions

Across higher education in the United States, the syllabus has not only become an expected course document, but often an institutional accreditation requirement. While instructors and students commonly recognize that the syllabus provides an explanation of a given academic course, aspects of the syllabus beyond its content are discussed less often. For example, as with other types of documents, the syllabus design and its content organization might impact the understanding or recall of the included information. Further, how documents are presented to their intended audiences can influence audience attention and perceived value. For example, Thompson (2007) found that effective presenters portray themselves as caring and friendly while simultaneously remaining serious about the contents of the document. However, the impact of syllabus delivery by an instructor on content memory as well as course and instructor impressions has not been systematically investigated. For these reasons, this project investigated several aspects of syllabi: placement of targeted information, the use of graphics to draw attention to and aid in the memory of targeted information, and instructor manner of delivery. We measured impact both on student attitudes toward the course and the instructor, as well as on student memory of content within the syllabus.

According to Habanek (2005), the course syllabus “provides an important and maybe the only, vehicle for expressing accountability and commitment.” The standard components of the syllabus include the listing of the instructor’s name, office hours, contact information, course title, course objectives, required texts, schedule of assignments, and grading policy (D’Antonio, 2007; Habanek, 2005). Typically, these types of content are placed in the syllabus roughly in the order listed, which may help students locate specific types of information. According to Appleby (1994), the syllabus serves seven primary purposes, several of which go beyond course logistics.

It aids in planning and clarifying the course, introduces the instructor to his or her students, explains the institutional role of the course, defines the various aspects of the course, justifies student development by means of the course, communicates the nature and content of the course to faculty and administrators, and it provides a documented record of instructor career. In order for the syllabus to meet these intended functions, however, students must attend to and remember the information within it.

As alluded to above, there has been little to no published research about syllabus organization and layout. What makes different types of information stand out to students? Does the location of information affect student recognition and impressions? What might instructors do to help students know what is important and positively influence student impressions of themselves and of the course? Prior research in vision science, memory, and impression formation might help us answer these questions.

Vision science research has shown that our eyes are attracted to objects that are most different from the surrounding objects or background, whether in color, intensity, or size (e.g. Itti Koch, & Niebur, 1998). Further, strength of memory is directly related to strength of attention (Russell & D'Hollosy, 1992). Thus, it is possible that students, or the audience of any document, might better remember targeted content if the content is made to visually *stand out*. Secondly, student impressions may be influenced by syllabus content, especially those aspects that are better attended.

The location of targeted content within a syllabus might also impact student recognition and student impressions. The serial position effect suggests that individuals will recall the first and last items of a list more easily than items in the middle (Reed, 2000). Related to the serial position effect, research on impression formation by Peterson and DuCharme (1967) found that

earlier stimuli, specifically positive words read in sequence, influenced participants more than later stimuli, leaving participants with a more favorable impression of the overall list. These studies suggest that instructors who want students to remember specific information contained in the syllabus, especially with respect to content that might set a desired impression, should place that content at the beginning of the syllabus.

However, syllabus design and layout are not the only factors that might influence student attention, memory, and impressions. Communication by the instructor, particularly in face-to-face courses, is likely to be an influential factor. Through our own academic experiences, instructor syllabus delivery on the first day of class is likely to fall into one of three common approaches: instructors will intentionally take the time to read through the syllabus with the class, instructors will advise students to read it on their own, or instructors will give a quiz on the syllabus content in order to encourage students' careful reading of the material. Perception research suggests that there is no difference between visual and auditory manners of delivery with respect to the number of words recalled in a document (Brand & Jolles, 1985). However, when professors present the syllabus verbally, optimism and enthusiasm for the class can be displayed, and their words can draw attention to specific content within the syllabus. We submit that these classroom delivery factors – enthusiasm and directed attention – might have the ability to enhance positive first impressions of the instructor and the course, as well as impact memory for content within the syllabus. Also, while the use of a quiz might motivate students to more closely attend to the syllabus – yielding better recall – it might also lead to a less positive first impression of the instructor and the course in general.

Because it is typically disseminated on the first day of class, the delivery of the syllabus also has the potential to strongly influence the students' first impressions of both the course and the instructor, and to set the tone for the newly begun academic term. First impressions are especially powerful for several reasons. Lindgaard, Fernandes, Dudek, and Brown (2006), showed that an opinion about visual items can be formed in 50 ms. Once the impression is made, it influences how one interprets later events. For example, confirmation bias research shows that subsequent interpretations of a person, situation, or event, especially if any ambiguity is involved, will usually confirm one's already established hypothesis (Rabin and Schrag, 1999).

Research also suggests that first impressions are influential within academic settings. For example, Ambady and Rosenthal (1993) showed that students' initial impression of an instructor, having formed within the first week, showed very high correlations with final evaluations given at the end of the semester. In Buchert, Laws, Apperson, and Bregman (2008), the relationship and comparison between instructor reputations and student first impressions were analyzed. The researchers concluded that students made first judgments using small amounts of information based on early experiences with the instructor. Another example of the semester-long impact of the first day of class was shown by Wilson and Wilson (2007), who found that students who experienced a positive first day of class completed the course with significantly higher grades than those who reported a negative first day of class. However, these studies did not specifically investigate the impact of different manners of delivery by the instructors.

Given the prevalence of syllabi and the lack of published research directly related to syllabus design and instructor delivery, this study systematically investigated the impact of targeted content location and visual presentation in conjunction with instructor manner of delivery of the syllabus on students' impressions and content recognition, both of which would

be likely to have long lasting effects on student attitudes about and expectations for the course and instructor. Based on the prior research from vision science and memory studies, we hypothesized that content located at the beginning of the syllabus would be more easily remembered than content located in the middle of the syllabus, that content presented with a graphic would be better remembered than content presented in a textual format similar to the rest of the syllabus, and that a verbal walk-through of the syllabus by the instructor would lead to targeted content being more easily recognized than an independent review by students or the forewarning of a quiz. In regards to first impressions, we hypothesized that the instructor's verbal overview of the syllabus – specifically delivered in an enthusiastic manner - would lead to more positive impressions of both the course and the instructor.

Method

Participants

Participants were recruited from the behavioral sciences research participant pool and via recruitment flyers posted across the university, a four-year undergraduate institution in the Midwest of the United States. A pool of 166 students participated. The final sample included 83 junior and 40 freshmen participants; the remaining 43 participants did not provide their academic class year. Two participants chose not to complete the second trial, and thus, their data were not included in the analyses.

Design

This study employed a 2 (Targeted Content Placement: Beginning or Middle) x 2 (Targeted Content Style: Textual or Graphic) x 3 (Manner of Delivery: Verbal Overview, Quiz, or Independent Review) mixed participants design. The factors of Placement (between variable) and Content Style (within variable) were manipulated through variations of an experimental

syllabus, and Manner of Delivery was manipulated by one of the researchers roleplaying as an instructor. The targeted content of interest for this study was a department mission statement. This specific targeted content was chosen due to an auxiliary objective of this study, unrelated to the experimental goals outlined above: the foreign languages department at our institution desired to better understand the possible impact of placing their mission statement on syllabi in regards to student attitudes about the course and leadership development.

Dependent variables included both recognition accuracy and attitudinal responses, several of which incorporated Likert scales while others requested open-ended responses (see the Materials section for a more detailed description). Recognition accuracy was measured both for the targeted content (the mission statement), as well as for general content within the syllabus (e.g. number of exams, course policies, and assignments).

Placement refers to the location of the department mission statement within the syllabus. In the Beginning condition, the mission statement was placed as part of the first text on the syllabus, while in the Middle condition, the mission statement was placed in the middle of the document. Content Style refers to the visual presentation, or *look* of the mission statement within the syllabus. The Textual condition presented the mission statement using the same size and font as the rest of the document; the Graphic condition presented the mission statement using a different, bolded font and larger size, alongside the department's graphic logo. See Figure 1 for example illustrations of the graphic and textual content style conditions.

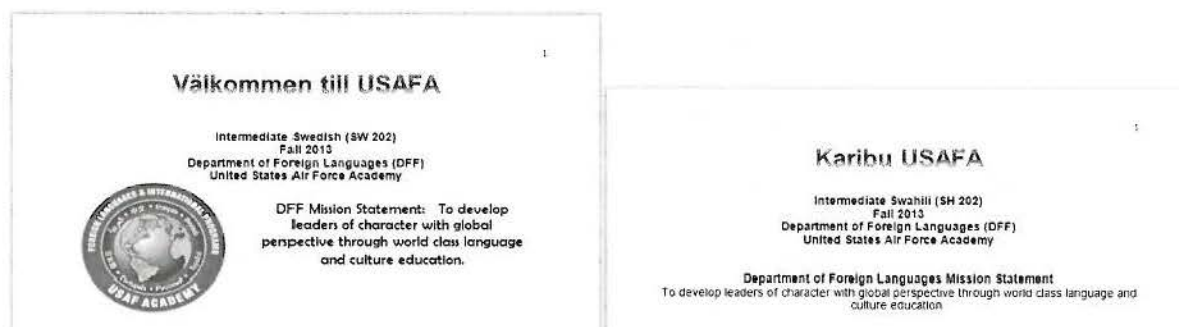


Figure 1. Illustrations of the top portion of the front pages of experimental syllabi showing the two styles of the mission statement, both in the Beginning location condition. The syllabus for a Swedish course (left) shows the Graphic condition, while the syllabus for a Swahili course (right) shows the Textual condition. Versions of the syllabus representing all combinations of conditions were created for both languages.

Manner of Delivery refers to the method by which the mock instructor presented the syllabus to the students. In the Verbal Overview condition the mock instructor walked through the syllabus orally with the students, specifically reading the mission statement and highlighting other important information throughout the syllabus; in the Quiz condition, the instructor notified the students of a quiz following their reading of the syllabus on their own; in the Independent Review condition the instructor allowed the students to read through the syllabus, with neither direction, prompting, nor the forewarning of a quiz. The time allotted for each condition of Manner of Delivery remained constant at five minutes.

Materials

Swahili and Swedish were chosen as the languages for the syllabi because neither language is taught at our institution, nor are they similar to another language taught here. Given that foreign language is a required part of the core curriculum at the university, we did not want prior familiarity with a language course to impact student attitudes.

We developed four syllabi for each language course, which represented all combinations of the two Targeted Content Placement conditions and the two Targeted Content Style conditions, for a total of eight individual syllabi. The syllabi were written in English, excluding a short, language-appropriate welcome phrase at the top of the first page. Each syllabus was four pages in length.

A 10-item questionnaire was created to assess student content recognition and attitudes. Five questions were multiple-choice; one specifically asking for the mission statement (e.g. “According to the syllabus, which of the following is the department mission statement?”), and the remaining four asking about other course information covered in the syllabus (e.g. “How many quizzes are there on the syllabus schedule?”). The other five questions pertained to impressions about the course and the instructor (e.g. “How excited are you for this course?” and “[What is] your first impression of the instructor?”). Two of the attitude questions pertained to opinions about leadership development inclusion in language courses and were used for the auxiliary study; thus they were not included in the analyses below.

Due to targeted content style being a within-subjects variable, we created two versions of the questionnaire so that the multiple-choice content questions were different, excluding the mission statement question. We chose similar questions for both questionnaires to provide a similar level of difficulty. For example, if one version asked about the number of exams, the alternate version asked about the number of quizzes; or, if one asked about accepted late work, the other version asked about the permitted use of online dictionaries.

Procedure

Prior to the start of data collection, participants were given a copy of an Informed Consent Document (ICD) to keep. The researcher explained the general procedure to the students, without identifying key variables or manipulations and ensured that participants understood that they were permitted to withdraw at any time from the study without penalty. Class year and name were the only personal data acquired from the students; however, names were only used to indicate participation and were not associated with any responses on the questionnaires, ensuring student data anonymity. Participant numbers were provided to all

students; these numbers were written on both of the first and second trial questionnaires, so responses could be linked across trials without identifying information. Only two students removed themselves after the first trial. All other students completed both trials.

Participants were tested in a classroom setting, in groups of up to 14 students per session. The experiment consisted of a mock first day of class scenario. Each student was given a syllabus for a language course, either Swahili or Swedish, for his or her first trial. To minimize differences across class groups, a single student investigator acted as the mock instructor for all participant sessions; and, in every session, this mock instructor followed a script in order to provide the same introduction and background, including education, previous relevant work, and experience with the language. The syllabus was presented by the instructor, in one of the three manners of delivery – verbal overview, quiz, or independent review. Following the given manner of delivery, the syllabi were returned to the instructor. The participants then answered the ten questions on the first questionnaire. Subsequent to the conclusion of this first trial, a second trial was immediately initiated using the same instructor introduction and manner of delivery and using syllabi with the same targeted content placement (both between-subject manipulations). In order to minimize practice and expectancy effects due to the within-subjects variable of targeted content style, the style received on the first trial was counterbalanced across participants. Further, the second trial syllabus differed by course language and the questionnaire included different content memory questions, as described above. By the end of data collection, each of the possible conditions had roughly the same number of student participants (ranging from 11 to 18, with an average of 14 students).

Following the two experimental trials, students were debriefed on the goals of the study. This debriefing also served to remind them to not communicate with other students regarding

any information about the study until the end of the semester, at which point data collection would have been complete. The total participation time for each session was twenty minutes including consent, instructor introduction, syllabus delivery, questionnaire completion and a repeat for the second trial.

Results

Recognition Memory Data

Quantitative data on both the targeted content accuracy and general content accuracy was collected and analyzed. Targeted content recognition in the form of choosing the exact department mission statement was measured as either correct or incorrect for a single question; therefore a series of Chi-Square analyses were performed to analyze the impact of our conditions. General content accuracy scores varied from zero to five for each participant, and thus were analyzed using analyses of variance.

Figure 2 illustrates the percentage of students in each condition who correctly recognized the targeted content in each condition. Note that for each manner of delivery (a between groups variable, shown in columns), half the participants received the textual mission statement first (top row of graphs) and half received the graphic statements first (bottom row of graphs). Solid bars indicate the Textual condition and the hatched bars indicate the Graphic condition. Location of the mission statement was also between groups, and we used darker bars (both solid and hatched) to indicate middle placement, while the lighter bars (both solid and hatched) indicate placement at the beginning. Percent correctness of the mission statement based on condition was analysed via Chi Square, with expected frequency assumed to be 25% due to the four-alternative multiple-choice format. For the first trial only, there was a significant effect of instructor presentation style, $X^2(2, N=164) = 9.13, p=.01$, such that verbal presentation (50% of

participants answered correctly, $N=56$), led to more correct responses than the independent review (28% correct, $N=58$) or the warning of a quiz (28% correct, $N=50$). Also in the first trial, there was a large discrepancy between the beginning and middle placement conditions. The middle condition led to significantly more accurate recognition than the beginning condition, $X^2(1, N=164) = 6.12, p=.01$, with more people answering correctly if it was located in the middle of the syllabus (47% correct, $N=79$) than at the beginning of the syllabus (25% correct, $N=85$). However, impact of location only occurs for the quiz and independent manners of delivery, because in the verbal condition, the accuracy difference between the beginning and middle locations was insignificant. Also pertinent to the first trial is the lack of a systematic difference between the graphic and textual conditions.

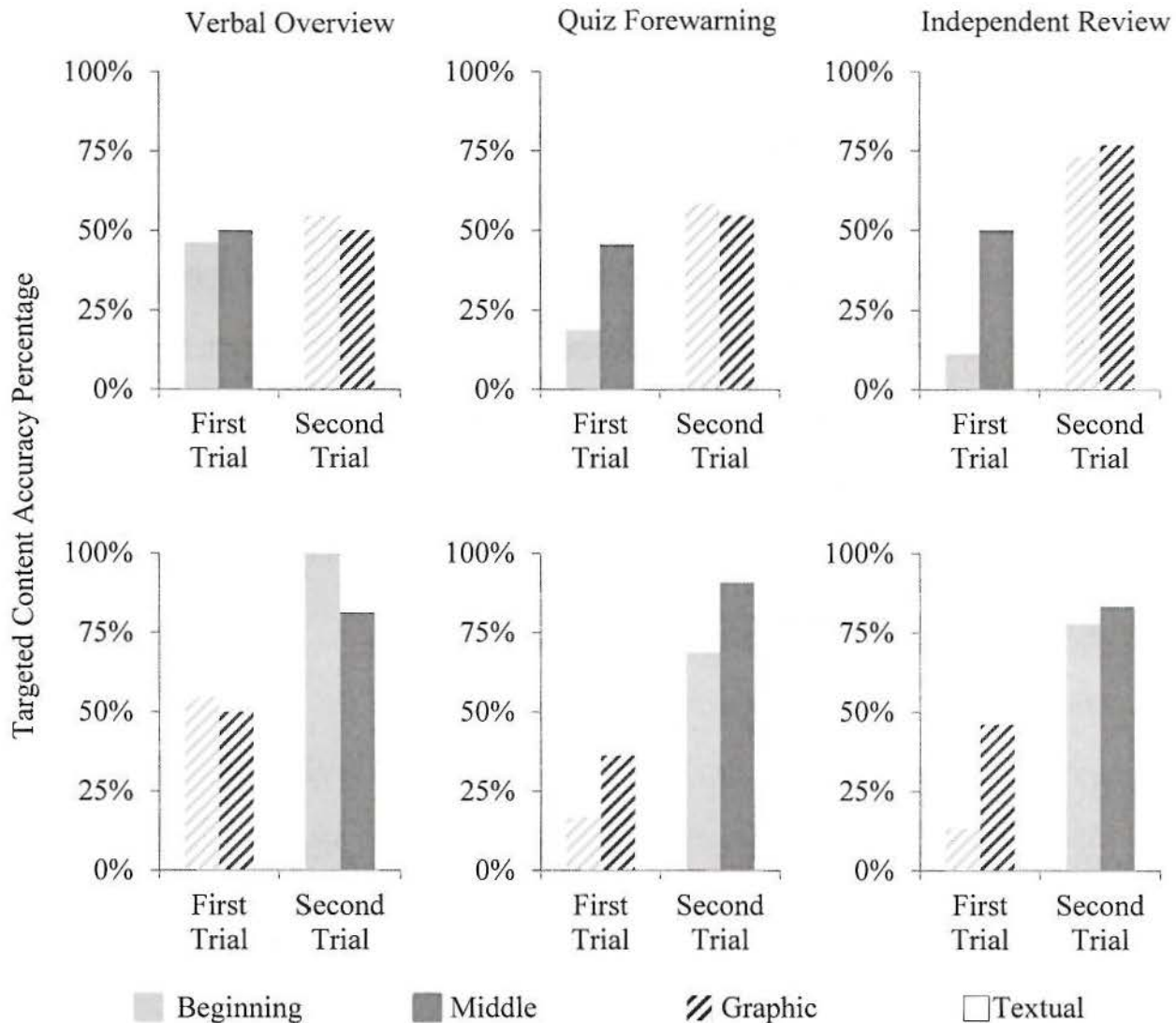


Figure 2. Targeted content accuracy by each manner of delivery. This figure illustrates the percentage of students who accurately recognized the targeted content in the syllabus. In the first trial, the middle targeted content location produced more correct answers than the beginning location, but only for the quiz and independent conditions. The second trial accuracy exceeded the first trial accuracy overall and in the second trial, the textual style condition produced more correct answers than the graphic style condition.

For the second trial, there was a significant difference in the percent correct, $X^2(1, N=164) = 12.68, p < .001$, with 72% of participants earning correct answers, in comparison to the overall first trial correctness of 35%. In contrast to the first trial data, there was no systematic difference in accuracy based on location of the targeted content or manner of delivery. However, the style of the mission statement led to a significant difference in recognition memory, $X^2(1, N=164) = 4.06, p = .04$, with better recall being found for the textual condition (83% correct, $N=86$) than the graphic condition (62% correct, $N=78$).

Moving beyond accuracy of only the targeted content, a 3 (Manner of Delivery) x 2 (Trial) Analysis of Variance was conducted for overall content accuracy. The variables of targeted content location and style were not included in this analysis because those variables did not pertain to any of the other content questions. Means and standard errors for each condition are illustrated in Figure 3, with the maximum possible score being 5 for each condition. There was a main effect for trial, $F(1, 161) = 41.49, p < .01$, indicating that the second trial produced more correct answers than the first trial. Also present was a main effect for manner of delivery, $F(2, 161) = 13.23, p < .01$, with the independent and quiz conditions producing higher overall correctness than the verbal condition. Finally, there was a significant interaction, $F(2, 161) = 3.21, p < .05$, due to greater accuracy gains in the second trial for the independent review than the verbal overview condition.

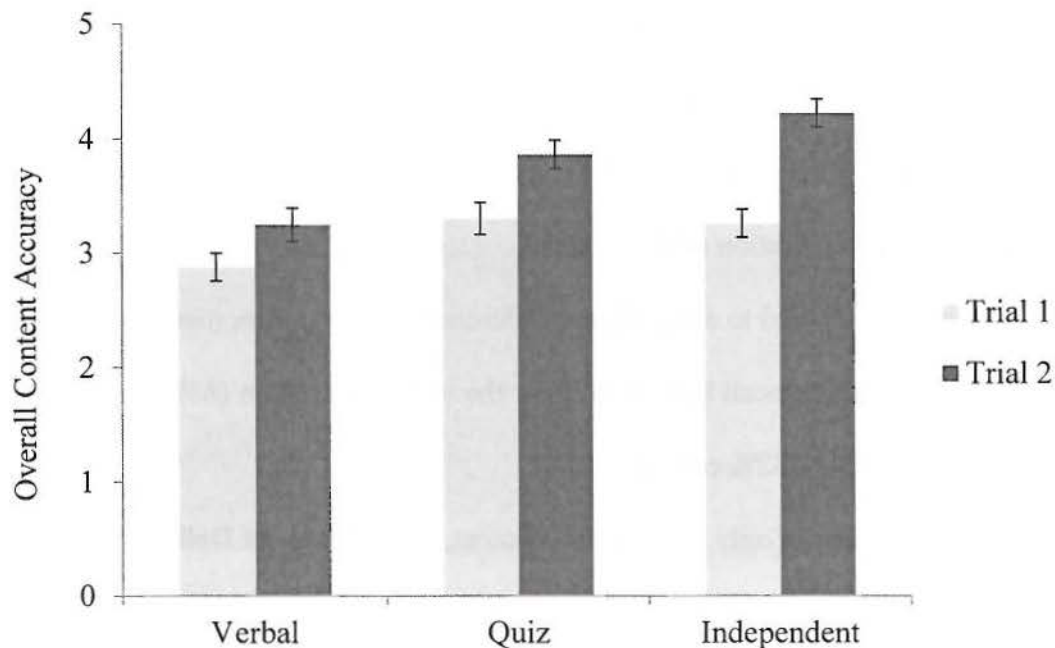


Figure 3. Means and standard errors for the Manner of Delivery x Trial interaction. Second trial accuracy was greater than the first trial accuracy, and students in the independent and quiz conditions outperformed those in the verbal condition. The interaction indicates that the trial difference in the independent condition is significantly greater than that of the verbal condition.

Impressions Data

In order to assess the impressions of students regarding the instructor and the course, we analyzed responses to three items on the questionnaire. One of the three attitudinal questions contained only a 5-point Likert scale (1=Strongly Agree to 5=Strongly Disagree). The second attitudinal question had two response parts, the first presenting a 10-point scale (1=Not Excited at all to 10=Very Excited), followed by an open-ended section for explanation, and the third attitudinal question contained only an open-ended space for explanation. We analyzed the closed-ended responses using ANOVAs.

Prior to the qualitative analyses of the open-ended responses, two of the authors separately read through all of the written responses and determined common response themes for

each question. Their categories were highly similar, leading to easily agreed-upon, consolidated categories for each question. The resultant number of categories ranged from five to seven, depending on the question. After the creation of the categories, one of the researchers coded all of the student responses. Some responses were categorized into more than one type of response theme because different parts of the response fit more than one category. The author then tallied the number of responses that fell within each category for each experimental condition, and created percent response scores based on the number of times that type of response was shown for a condition within the total response pool. The number of responses across the themes within each question did not systematically vary based on the location and style of the mission statement. Thus, all discussions and graphs in relation to open-ended responses only show percentages according to instructor manner of delivery.

The first question asked the students to rate agreement with the following statement, “Based on my review of the syllabus, I get the sense that this course would have substantial focus on leadership development with respect to culture and language.” A four-way, between-subjects ANOVA was conducted to determine whether targeted content location or style, manner of delivery, and trial would influence perceptions. The analysis indicated a main effect for trial, $F(1, 151) = 5.75, p < .02$, with the students becoming more neutral by the second trial (mean trial 1 = 2.8 and mean trial 2 = 3.0). The analysis also indicated a significant Style x Trial interaction, $F(1, 151) = 3.99, p = .05$, with students tending to agree most about the emphasis on leadership when they were exposed to the graphic image on the first trial. See Figure 4 for the interaction means, with lower numbers indicating more agreement and higher numbers indicating more disagreement. No other main effects or interactions were significant.

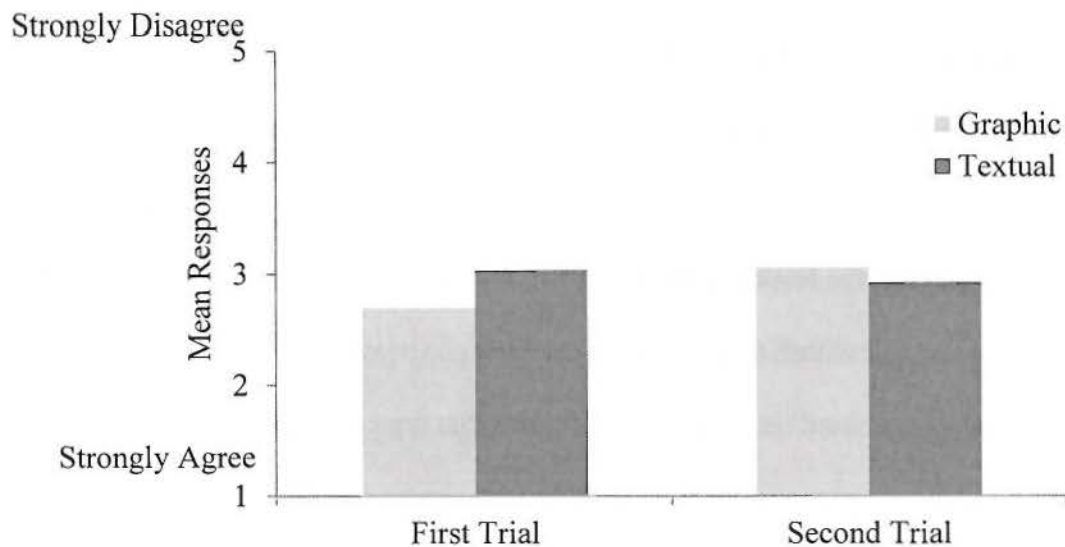


Figure 4. Student agreement via Likert scale to a course focus on leadership development with respect to culture and language. The significant interaction between trial and targeted content style shows that the most agreement occurred during the first trial for those participants who received the graphics style mission statement. (Note that style was a within variable, so participants received the opposite style condition on the second trial.)

The second closed-ended question instructed students, “From your reading of the syllabus, on a scale from 1 to 10, indicate how excited you would be to take this language class.” The data from a Trial x Manner of Delivery ANOVA revealed only a main effect for trial, $F(1, 161) = 12.685, p < .001$. The first trial mean was 5.043 and the second trial mean was 5.521, indicating that, on average, students were more excited for the course by the second trial, although opinions remained in the “Mildly Excited” region.

The question of excitement was followed by a space for hand-written explanation. While the ratings showed no significant effect of manner of delivery, the open-ended responses revealed more interesting trends. Student responses fell into seven general categories, see Figure 5. Although the largest number of participants reported indifference about taking the

hypothetical course regardless of manner of delivery, those in the verbal and independent conditions were more likely to report that they expected the course to be exciting or fun. Also, those in the verbal and independent conditions frequently indicated that the course would be fairly time intensive. Students in the quiz condition frequently stated that the course would be point-focused. In Figure 5, trial data were combined because the pattern of responses did not differ across the two trials.

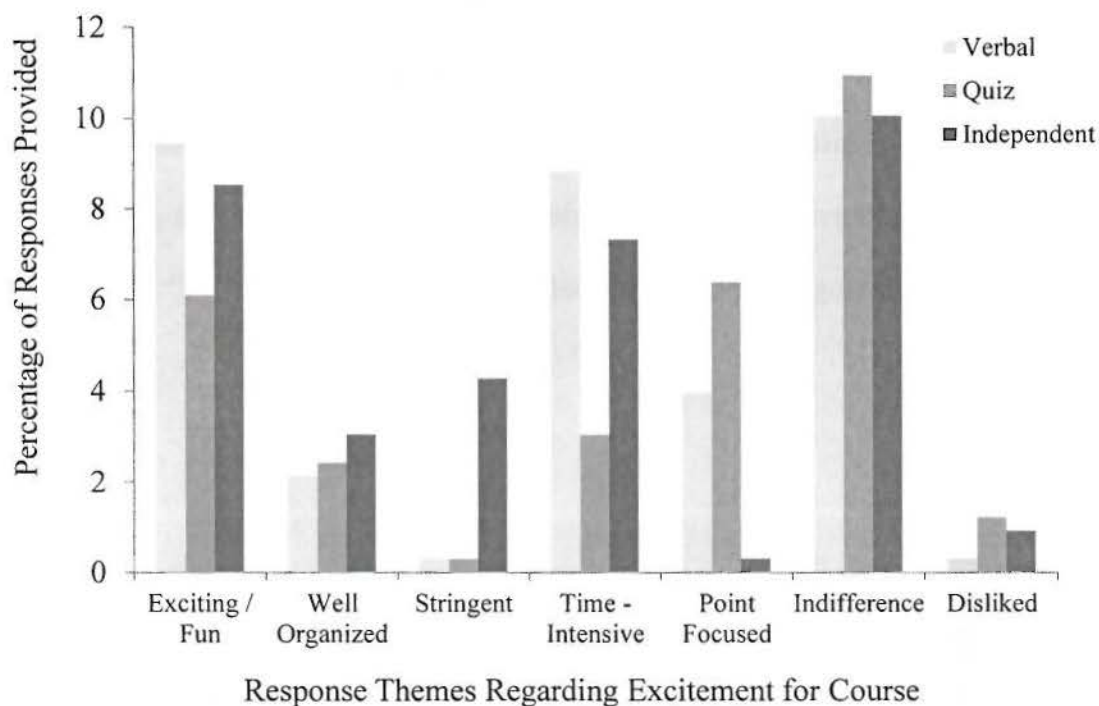


Figure 5. Combined trial responses on the impact of the syllabus and its presentation on student opinion of the course, falling into seven general response themes. Although many students reported indifference regardless of manner of delivery, students in the verbal and independent conditions most frequently described the course as exciting or time-intensive.

The second qualitative item stated, “Imagine that this was a true first day of class, and your instructor utilized syllabus delivery techniques similar to that of the experimenter. Based on the sample syllabus and the interactions during the syllabus introduction, describe your first

impression of said instructor.” The responses yielded five general themes, shown in Figure 6a (first trial) and Figure 6b (second trial). Overall, participants most often viewed the instructor as impressive or friendly when the instructor delivered the syllabus verbally or when the instructor informed the students of a quiz to follow. In contrast, the instructor was mostly likely labeled as impersonal when the participants were given no syllabus direction, as in the independent condition. Participants who expressed positive reactions to the instructor provided responses such as, “[The instructor] seems like a good teacher – fair, but expects high standards to be met,” or “Very intelligent,” and even, “Friendly, out-going, competent, and confident.” Less positive responses included, “[The instructor] didn't really go over [the] syllabus. [The instructor] just gave it to us to look over ourselves,” and, “I would have liked [the instructor] to go over the syllabus instead of just having us look over it briefly.”

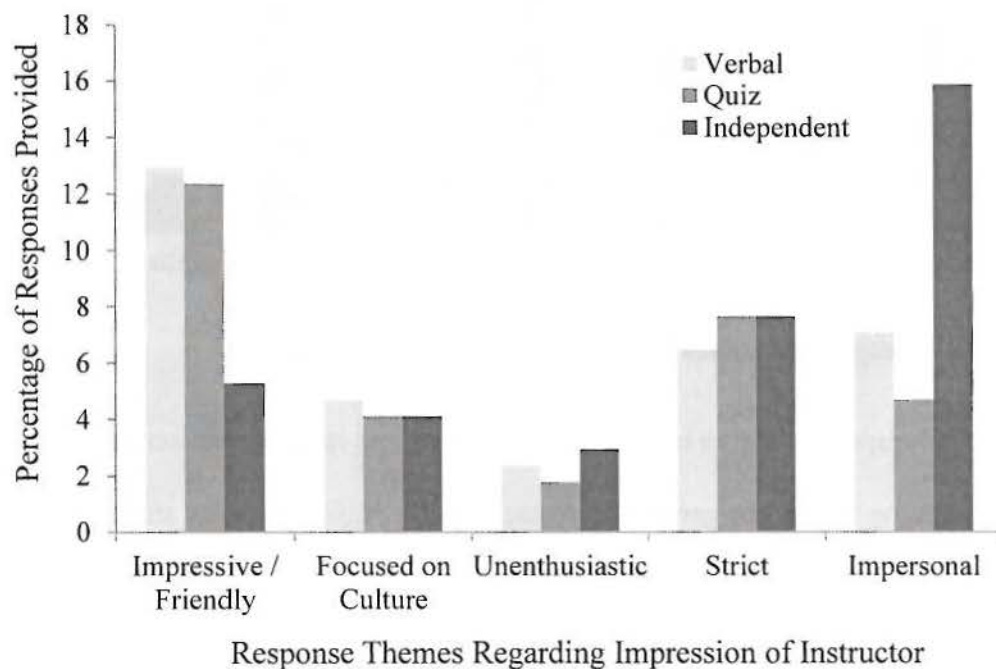


Figure 6a. First trial impact of Manner of Delivery on student impressions of the instructor. Early impressions of the instructor being seen as friendly or as impersonal depended on Manner of Delivery.

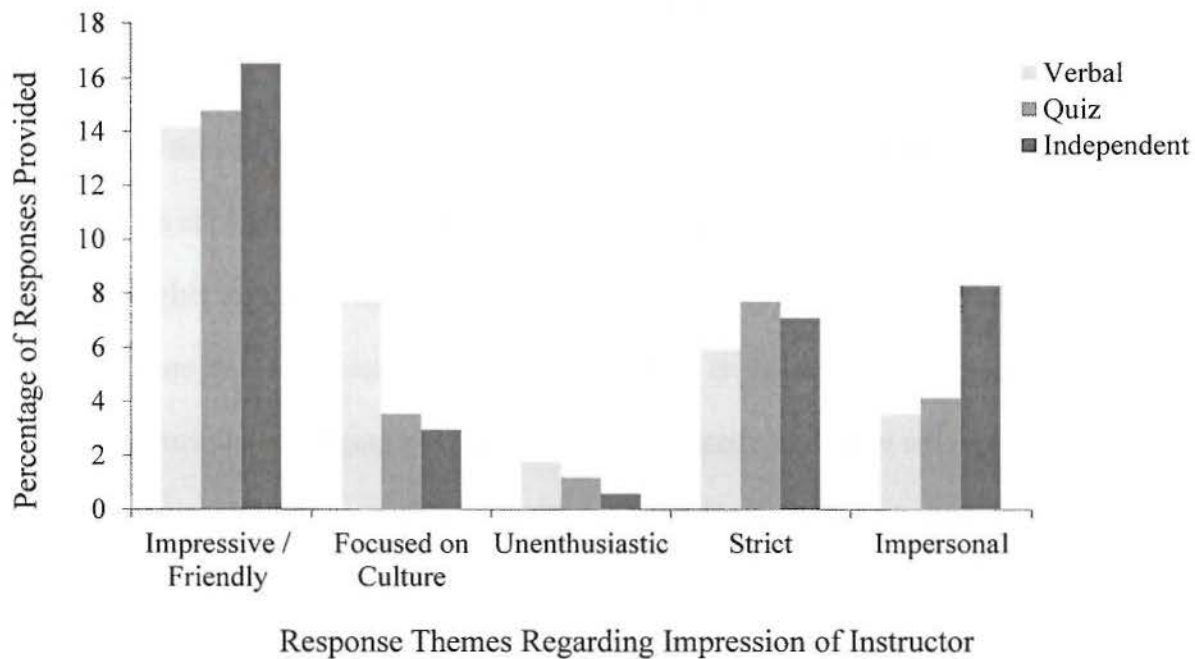


Figure 6b. Second trial impact of Manner of Delivery on student impressions of the instructor. This figure illustrates a noticeable increase in positive responses and a decrease in negative responses, in contrast to the first trial data.

Interestingly, participant opinions of the instructor shifted from the first trial to the second trial. As Figure 6b illustrates, regardless of instructor Manner of Delivery, the largest percentage of responses indicated that participants felt that the instructor was impressive or friendly. Nevertheless, if the response indicated that the instructor was impersonal, it was still most likely to occur in the independent condition.

Discussion

Our results suggest several key points related to memory of syllabus content and course / instructor impressions based on short interactions with an instructor as she presented a syllabus. Some of the memory findings ran counter to our hypotheses based on memory and vision science research. However, we believe they can be explained by some human factors work on the banner

effect. Together, the memory and impression findings offer guidance to instructors or others who are presenting a document such as a syllabus.

With respect to content memory, the targeted content of our syllabus was most accurately remembered when placed in the middle of the document and in the same textual style as the rest of the document, and it was more accurately remembered when the instructor explicitly stated it to students. The location and style condition findings go directly against the predictions based on the serial order effect and the benefit of visual attention created by a graphic in a document that is otherwise filled with text. As we pondered these results and considered some human factors research, we came to believe that student prior experience with syllabus documents combined with prior experience with other documents led to these counterintuitive findings. More specifically, the beginning of a syllabus traditionally includes the course name, the name of the instructor, and his or her office number and hours. Such logistics information, although arguably important on some levels, may be viewed by students as less important than understanding of how the course will be organized and the expectations for student performance or behaviors. Further, when the mission statement was placed in conjunction with the departmental graphic, it might have increased the impression that it was “fluff”, similar to banner advertisements that appear on websites and in documents such as brochures. Research on banner blindness shows that a reader’s prior conceptions will lead to the filtering of information thought to be extraneous. For example, using eye-tracking measures, Burke, Hornoff, Nilson, and Gorman (2005) found that participants rarely looked directly at banners or advertisements on a given page, and they had low recall of banner content. The active avoidance of looking at the banner ad shows that some aspects of it (location, use of graphics and bright colors) are processed to the extent that they influence subsequent looking and reading behavior. This is likely the case for our

conditions in which the instructor did not explicitly guide participants' attention to the mission statement. Some additional support that the graphic image was at least somewhat processed comes from the finding that the first trial, graphics condition was the only one condition that led to some agreement that the course would include a focus on leadership. Even if the mission statement and the departmental seal were not closely attended, the presence of the seal might have fostered a more official impression, which then influenced the sense that leadership was involved. However, for those students who received the graphic condition on the second trial, the first impression of less agreement that the course would involve leadership prevailed (confirmation bias). Ultimately, the memory influences based on targeted content placement and use of graphics may not be due to increasing attentiveness, but instead due to increasing a viewer's tendency to disregard the information based on assumptions of irrelevance. However, an instructor's explicit mention of information, as occurred in our verbal Manner of Delivery condition, can offset those presumptions and lead to better memory for that targeted information.

In contrast to the targeted content being remembered most accurately in the verbal Manner of Delivery condition, overall content was least accurately remembered in that condition compared to the independent review and the quiz conditions. While the verbal overview of targeted content indicated specificity, which aided memory of the mission statement, the verbal overview of the remaining content was broad and all-inclusive, possibly leading to cognitive overload. Additionally, the instructor paraphrased each section of the syllabus so as not to read the entire document verbatim, which may have drawn the students' attention away from the exact details of the syllabus. In contrast, in the quiz or independent conditions students were able to focus on aspects of the syllabus they determined pertinent, which seemed to generally match

the types of questions we asked, again possibly due to prior experiences with syllabi and syllabi content quizzes.

Overall, both targeted and overall content were more accurately recognized after the second trial. Although we did not predict this finding, it does seem intuitive. In spite of counterbalancing content questions between questionnaires, we attribute this increase in accuracy to students expecting a second questionnaire with memory questions, and therefore paying closer attention to the second syllabus. Although the questions were not exactly the same, they had a similar focus, (e.g. “How many points are associated with quizzes?” versus “How many exams will there be?”); and, the mission statement question was the same for both questionnaires. Essentially, students were able to determine the type of questions likely to be asked, and search for that information on the second syllabus. We believe that this selected memory effort is probably the strategy taken by many students when they are forewarned by their teachers to expect a syllabus quiz in their course.

Overall, the above patterns of memory findings suggest that the use of the different types of syllabus delivery should be carefully considered by instructors. More specifically, instructors should reserve the verbal presentation for explicit information that they want to highlight, especially if that information might be likely to be interpreted by students as less important. Otherwise, students seem to be able to accurately attend to syllabus content that would be important for them to know, or at least they will do so if given time in class to review the syllabus, either with or without the forewarning of a quiz.

Student impressions of the instructor and the course also seemed to depend on manner of delivery and trial, and lead to some recommendations for instructors. In the first trial, the perception of the instructor as impersonal was much more common in the independent Manner

of Delivery condition, while the perception of the instructor as impressive or friendly was most frequently provided by students in the verbal and quiz delivery conditions. We argue that instructor interaction in the verbal condition suggested to students that the instructor would be approachable and accessible over the course of the semester. Similarly, informing students of a quiz indicated that the instructor would be upfront and forthright. However, by the second trial, the most common perception of the instructor for all Manner of Delivery conditions was as impressive or friendly. We attribute this shift to be due to the friendly approach taken by the mock instructor as she disseminated and collected the quizzes and began the second trial. Thus, it seems that, at least within the first 20 minutes of a first day of class, the student impressions of an instructor are somewhat malleable, and with continued friendliness, students who at first may have had less favorable impressions might develop a more positive impression. These first day impressions are likely to set student expectations and become supported by confirmation bias, thus leading to high correlations with end-of-semester perceptions (e.g. Ambady & Rosenthal, 1993; Wilson & Wilson, 2007).

Trial also impacted the pattern of responses when students were asked to rate their excitement for the course, with an increase of excitement reported in the second trial. We attribute this increase to extended time with the mock instructor, who most students reported as providing a positive and friendly classroom environment by the second trial. Although the open-ended explanations did not show systematic differences between trial 1 and trial 2, some showed qualitative differences based on Manner of Delivery. Not surprisingly, the most common self-reported response was that of indifference, regardless of Manner of Delivery. At our institution, language courses are required for most students, and required courses are often regarded with less than enthusiasm. Of more interest were the perceptions of the course being exciting or fun,

with that perception being held most strongly by those in the Verbal and Independent Manner of Delivery conditions. We believe that for those students who do not report indifference, the default attitude is most often positive, as starting a new class is generally fun and exciting. Additionally, a verbal review often led to the impression of time-intensiveness, likely because more aspects of the syllabus were highlighted than students were likely to attend to on their own. In contrast, those in the independent review often reported a combination of perceptions about time-intensiveness coupled with that of a stringent instructor, perhaps due to the perceived lack of support from the instructor. The mention of a quiz, however, led to a large percentage of reported perceptions of the course being point-focused, perhaps because quizzes themselves are associated with points..

Thus, it appears that, in addition to influencing memory of syllabus content, an instructor's manner of delivery of the syllabus can somewhat systematically influence student impressions of both the instructor and the course. Overall the verbal and quiz conditions led to the more positive views of the instructor, while the verbal and independent conditions led to the more positive views of the course. Thus, as long as an instructor is selective about what he or she overviews (based on the memory findings summarized above), the verbal condition might best set a positive tone for both the course and the instructor.

Conclusions

Our results indicate that syllabus design and manner of delivery can impact both memory of content as well as impressions of the course and the instructor. Somewhat counter-intuitively, an attempt to draw attention to a specific piece of information, a departmental mission statement, by placing it at the beginning of the syllabus and using a graphic actually led to decreased memory for that information. We believe this was due to the banner effect (e.g. Burke et al.,

2005), in which readers of a document assume that information is not important based on prior experience with that type of document and style of information. In our case the beginning location within the syllabus combined with the graphic may have led to an assumption that the mission statement was “course fluff” that wasn’t necessary to remember. In contrast, content that is likely to be naturally interpreted as “important” by students (e.g. number of exams, course policies) is most often remembered when students are allowed to independently review the document or are forewarned of a quiz. However, an instructor’s explicit verbal overview of specific content can override students’ assumptions of importance by drawing attention to the information.

Unfortunately, verbal overview seems to be a double-edged sword. Student memory was less accurate for bulk content that was overviewed by the instructor than for content that was self-selected by students during independent review or in preparation of a syllabus quiz. Thus, instructors should carefully consider what they want to highlight from the syllabus on the first day of class, giving specific emphasis to pieces of information that they deem important but that might not be interpreted as important by the students.

Our results also indicated that, overall, the most positive attitudes regarding both an instructor and a course are seen when the instructor goes through the syllabus verbally using a friendly style of interaction. The forewarning of a quiz often led to an impression that the course was focused on points, while independent review often led to an impression that the instructor was indifferent to students. How these conditions might impact impressions if they were combined (e.g. verbal review along with a syllabus quiz) was not assessed and could be examined in future research.

Additional future research should also explore how these initial impressions and memory for syllabus content might change (or not) across the course of a semester. Other researchers (e.g. Ambady & Rosenthal, 1993; Wilson & Wilson, 2007) have shown correlations between early and end-of-semester instructor impressions, but they have not specifically linked them to different approaches used on the first day of class. Further, most instructors have had the experience of students forgetting information throughout the semester that was clearly stated on the syllabus. Thus longer-term retention of syllabus content should be studied with respect to the design and delivery of the syllabus. In sum, although there are many future directions of exploration, the current study provides a useful foundation for understanding the effects of syllabus design and instructor manner of delivery on student memory of syllabus content and impressions of an instructor and the course.

References

- Buchert, S., Laws, E. L., Apperson, J. M., & Bregman, N. J. (2008). First Impressions and Professor Reputation: Influence on Student Evaluations of Instruction. *Social Psychology Education, 11*, 397-408.
- Burke, M., Hornoff, A., Nilson, E., & Gorman, N. (2005). High-Cost Banner Blindness: Ads increase perceived workload, hinder visual search, and are forgotten. *ACM Transactions on Computer-Human Interaction, 12*(4), 423-445.
- Habaneck, D. V. (2005). An Examination of the Integrity of the Syllabus. *College Teaching, 53*(2), 62-64.
- Itti, L., Koch, C., & Niebur, E. (1998). A Model of Saliency-Based Visual Attention for Rapid Scene Analysis. *IEEE Transactions on Pattern Analysis and Machine Intelligence, 20*(11), 1254-1259.
- Lindgaard, G., Fernandes, G., Dudek, C., & Brown, J. (2006). Attention Web Designers: You Have 50 Milliseconds to Make a Good First Impression! *Behaviour and Information Technology, 25*(2), 115-126.
- Peterson, C. R., & DuCharme, W. M. (1967). A Primacy Effect in Subjective Probability Revision. *Journal of Experimental Psychology, 61*-65.
- Rabin, M., & Schrag, J. L. (1999). First Impressions Matter: A Model of Confirmatory Bias. *The Quarterly Journal of Economics, 37*-82.
- Reed, P. (2000). Serial position effects in recognition memory for odors. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 26*(2): 411-422.
- Russell, E. W., & D'Hollosy, M. E. (1992). Memory and Attention. *Journal of Clinical Psychology, 48*(4), 530-538.

- Thompson, B. (2007). The Syllabus as a Communication Document: Constructing and Presenting the Syllabus. *Communication Education*, 56(1), 54-71.
- Wilson, J. H., & Wilson, S. B. (2007). The First Day of Class Affects Student Motivation: An experimental study. *Methods and Techniques*, 34(4), 226-230.